

IN THE CLAIMS:

The following listing of the claims replaces all earlier listings and all earlier versions.

---

1. (Currently Amended) A method of creating an image, said image to be formed by ~~compositing at least~~ rendering a plurality of graphical objects to be composited according to one or more compositing operations, each ~~said~~ object having a predetermined outline, each compositing operation being at least defined by one or more operands, each operand representing one of said graphical objects or a result of another of the compositing operations, said method comprising the steps of:

A1 determining an expression for each of a plurality of active regions;  
each said active region for each of the graphical objects, each of the active regions being defined by at least one region outline following at least one of said the predetermined outlines or parts thereof;

determining a further active region corresponding to each of the compositing operations, the further active regions being at least dependent upon the active region associated with each operand of the corresponding compositing operation;

determining a clip region for each operand of each of the compositing operations, each clip region representing a minimum region in which a corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing operation;

determining ~~expressions representing each of a plurality of an~~  
~~effective regions depending on at least one characteristic of at least one active region;~~  
~~wherein each said effective region has a corresponding compositing operation~~ region for at  
least each of the compositing operations wherein the effective region for a particular  
corresponding compositing operation is equal to the intersection of the further clip region  
of the particular corresponding compositing operation and the active regions associated  
with the operands of the particular corresponding compositing operation; and

applying ~~said corresponding~~ the compositing operations ~~substantially~~  
to ~~said~~ the effective regions to create ~~said~~ the image.

2. (Currently Amended) A method according to claim 1, wherein a  
further region is determined on the basis that a particular region corresponds to a primitive  
expression each clip region is further dependent upon an active region of one of the  
operands of the associated compositing operation, that one operand not being the operand  
for which the clip region is being determined.

3. (Currently Amended) A method according to claim 1, wherein, ~~an~~  
~~effective region is determined on the basis that a particular active region corresponds to a~~  
~~primitive expression~~ for those operands that represent graphical objects, the corresponding  
effective region is the corresponding clip region.

4. and 5. (Canceled).

6. (Currently Amended) A method according to claim 1, wherein ~~said~~ the image is at least in part a pixel-based image.

7. (Currently Amended) A method according to claim 1, wherein a wholly opaque object in a particular region acts to eliminate one or more operations contributing to at least one other object constituting ~~said~~ the particular region, wherein ~~said~~ the at least one other object is obscured by ~~said~~ the wholly opaque object in a space in which ~~said~~ the outlines are defined.

8. (Currently Amended) A method of creating an image, ~~said~~ the image to be formed by ~~compositing at least~~ rendering a plurality of graphical objects to be composited according to one or more compositing operations, each ~~said~~ the object having a predetermined outline, each compositing operation being at least defined by one or more operands, each operand representing one of the graphical objects or a result of another of the compositing operations, said method comprising the steps of:

~~dividing a space in which said outlines are defined into a plurality of regions~~ determining an active region corresponding to each of the graphical objects, each ~~said of the active~~ region being defined by at least one region outline following at least one of ~~said~~ the predetermined outlines or parts thereof;

determining a further active region corresponding to each of the compositing operations, the further active regions being at least dependent upon the active region associated with each operand of the corresponding compositing operation;

determining a clip region for each operand of each of the  
compositing operations, each the clip region representing a minimum region in which a  
corresponding operand contributes to the image and being dependent on a further clip  
region representing the result of an associated compositing operation;

41  
~~determining a plurality of further effective regions depending on at  
least one characteristic of at least one region, wherein each said further region has a  
corresponding compositing operation for each of the compositing operations wherein the  
effective region for a particular corresponding compositing operation is equal to the  
intersection of the further clip region of that particular corresponding compositing  
operation and the active regions associated with the operands of that particular  
corresponding compositing operation;~~

~~mapping said further the effective regions and corresponding  
compositing operations into a compositing table, comprising a plurality of levels, wherein  
each said level of said the compositing table represents at least one operation for rendering  
an object or parts thereof of the operators or represents an outline for clipping at least one  
other level; and~~

~~compositing said the image using said the compositing table.~~

9. (Currently Amended) A method according to claim 8, wherein a  
~~further region is determined on the basis that a particular region corresponds to a primitive  
expression each clip region is further dependent upon an active region of one of the~~

operands of the associated compositing operation, that one operand not being the operand for which the clip region is being determined.

10. (Currently Amended) A method according to claim 8, wherein, ~~an effective region is determined on the basis that a particular active region corresponds to a primitive expression~~ for those operands that represent graphical objects, the corresponding effective region is the corresponding clip region.

11. and 12. (Canceled).

13. (Currently Amended) A method according to claim ~~11~~ 8, wherein a level comprising a push operation is added to ~~said the~~ the compositing table.

14. (Currently Amended ) A method according to claim ~~11~~ 8, wherein a corresponding compositing expression of ~~said the~~ the further active region is complex.

15. (Currently Amended) A method according to claim ~~14~~ 8, wherein a level comprising a clip operation is added to ~~said the~~ the compositing table.

16. (Currently Amended) A method according to claim 8, wherein a further active region is determined on the basis that ~~said the~~ the corresponding compositing operation has a complex left operand.

17. (Original) A method according to claim 16, wherein a level comprising a pop operation is added to ~~said~~ the compositing table.

18. (Currently Amended) A method according to claim 17, wherein ~~said~~ the pop operation will remove any unused pixel being outside a further active region representing ~~said~~ the complex left operand, during compositing of ~~said~~ the complex left operand.

19. (Currently Amended) A method according to claim 18, wherein ~~said~~ the further active region is the active region of ~~said~~ the complex left operand.

20. (Currently Amended) A method according to claim 18, wherein ~~said~~ the further active region is transformed to a ~~still further~~ an effective region by ~~said~~ the pop operation.

21. (Currently Amended) A method according to claim 20, wherein ~~said~~ the effective ~~still further~~ region is the effective region of ~~said~~ the complex left operand.

4122. (Currently Amended) A method according to claim 21, wherein ~~said~~ the effective ~~still further~~ region corresponds to a complex expression.

23. (Currently Amended) A method according to claim 22, wherein a level comprising a clip operation is added to ~~said~~ the compositing table.

24. (Currently Amended) A method according to claim 8, wherein a further active region is determined on the basis that ~~said~~ the corresponding compositing operation has a primitive left operand.

25. (Currently Amended) A method according to claim 9 8, wherein a level comprising an operation and a data fill value of a particular object constituting ~~said~~ the further active region, is added to ~~said~~ the compositing table.

26. (Currently Amended) A method according to claim 24, wherein ~~said~~ the further active region corresponds to a complex expression.

27. (Currently Amended) A method according to claim 26, wherein a level comprising a clip operation is added to ~~said~~ the compositing table.

28. (Currently Amended) A method according to claim 24, wherein a level comprising a push operation is added to ~~said~~ the compositing table.

29. (Currently Amended) A method according to claim 8, wherein ~~said~~ the compositing table is optimised in regard to the number of pixel operations required to render ~~said~~ the image.

30. (Currently Amended) A method according to claim 8, wherein a corresponding compositing expression is a hierarchically structured representation of a particular region represented by ~~said~~ the corresponding compositing expression.

A1  
31. (Currently Amended) A method according to claim 30, wherein ~~said~~ the mapping comprises modifying a manner in which ~~said~~ the corresponding compositing expression is evaluated without modifying ~~said~~ the hierarchically structured representation.

32. (Currently Amended) A method according to claim 8, wherein ~~said~~ the image is at least in part a pixel-based image.

33. (Currently Amended) A method according to claim 8, wherein a wholly opaque object in a particular region acts to eliminate one or more operations contributing to at least one other object constituting ~~said~~ the particular region, wherein ~~said~~ the at least one other object is obscured by said wholly opaque object in a space in which ~~said~~ the outlines are defined.



34. (Withdrawn) A method of optimising an expression representing the layout of one or more objects, each said object having a predetermined outline, said method comprising the steps of:

dividing a space in which said outlines are defined into a plurality of regions, each said region being defined by at least one region outline substantially following at least one of said predetermined outlines or parts thereof;

determining a plurality of further regions depending on at least one characteristic of at least one of said regions, wherein each said further region has a corresponding compositing operation; and

forming said optimised expression from said plurality of further regions and corresponding compositing operations.

35. (Withdrawn) A method according to claim 34, wherein said plurality of further regions modifies a manner in which said expression is evaluated.

36. (Withdrawn) A method according to claim 35, wherein further operators are associated with at least one of said further regions.

37. (Currently Amended) A method of creating an image, ~~said the image~~ to be formed by evaluating rendering a plurality of graphical objects to be composited according to a hierarchically structured compositing expression ~~representing said image,~~ each object having a predetermined outline, said the hierarchically structured compositing

expression consisting of a plurality of graphical objects and operations arranged as sub-expressions, each said object having a predetermined outline, each compositing operation being defined by at least one compositing operator and one or more operands, each operand representing one of the graphical objects or a sub-expression representing the result of another of the compositing operations, said method comprising the steps of:

determining an active region for at least each sub-expression of said the hierarchically structured compositing expression, each said active region being dependent on the predetermined outlines of each graphical object associated with the corresponding sub-expression and operations on the operators contained in said each sub-expression;

determining a clip region for each operand of each of the sub-expressions, each clip region representing a minimum region in which a corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing operation;

~~calculating~~ determining an effective region for ~~a corresponding~~ each of the compositing operations of ~~said~~ the hierarchically structured compositing expression, ~~depending on at least one characteristic of at least one active region~~ wherein the effective region for a particular corresponding compositing operation is equal to the intersection of the further clip region of that particular corresponding compositing operation and the active regions associated with that particular corresponding compositing operation;

mapping each ~~said~~ the effective region and corresponding compositing operation into a compositing table, comprising a plurality of levels, wherein

each said level of said ~~the~~ compositing table represents at least one ~~operation for rendering an object or part thereof constituting at least one of said effective regions of the operators~~ or represents an outline for clipping at least one other level; and

evaluating said ~~the hierarchially~~ hierarchically structured compositing expression using said compositing table.

38. (Withdrawn) A method of calculating effective regions for a plurality of graphical objects, each said object having a predetermined outline, said method comprising the steps of:

A1 dividing a space in which said outlines are defined into a plurality of active regions, each said active region being defined by at least one region outline following at least one of said predetermined outlines or parts thereof, each said active region having at least one corresponding Boolean expression; and

calculating said effective regions depending on at least one characteristic of at least one corresponding Boolean expression, wherein each said effective region has a corresponding Boolean operation.

39. (Withdrawn) A method according to claim 38, wherein said corresponding Boolean operation is a stack operation.

40. (Withdrawn) A method according to claim 38, wherein said corresponding Boolean expression is primitive.

41. (Withdrawn) A method according to claim 38, wherein said corresponding Boolean operation has a primitive left operand.

42. (Withdrawn) A method according to claim 38, wherein said corresponding Boolean operation has a complex left operand.

43. (Currently Amended) A method of creating an image, ~~said~~ the image to be formed by compositing at least a plurality of graphical objects according to one or more compositing operations, each ~~said~~ object having a predetermined outline, each compositing operation being defined by at least one compositing operator and one or more operands, each operand representing one of the graphical objects or a result of another of the compositing operations, said method comprising the steps of:

~~dividing a space in which said outlines are defined into a plurality of~~  
determining an active regions corresponding to each of said graphical objects, each ~~said~~ active region being defined by at least one region outline following at least one of ~~said~~ the predetermined outlines or parts thereof;

determining a further active region corresponding to each of the compositing operations, further active regions being at least dependent upon the active region associated with each operand of the corresponding compositing operation;

~~determining a plurality of an effective regions depending on at least one characteristic of at least one active region, wherein each said effective region has a corresponding compositing operation~~ region for each of the compositing operations

wherein the effective region for a particular corresponding compositing operation is equal to the intersection of clip regions associated with that particular corresponding compositing expression and one or more of the active regions associated with the operands of that particular corresponding compositing operation, wherein each clip region represents a minimum region in which a corresponding operand contributes to the image;

mapping ~~said~~ the effective regions and corresponding compositing operations into a compositing table, comprising a plurality of levels, wherein each ~~said~~ level of ~~said~~ the compositing table represents at least one ~~operation for rendering an object or parts thereof of the operators or an outline for clipping at least one other level;~~ and compositing ~~said~~ the image using ~~said~~ the compositing table.

44. (Currently Amended) A method according to claim 43, wherein a further region is determined on the basis that a particular region corresponds to a primitive expression each clip region is further dependent upon an active region of one of the operands of the associated compositing operation, that one operand not being the operand for which the clip region is being determined.

45. (Currently Amended) A method according to claim 43, wherein, ~~an effective region is determined on the basis that a particular active region corresponds to a primitive expression~~ for those operands that represent graphical objects, the corresponding effective region is the corresponding clip region.

46. and 47. (Canceled).

48. (Currently Amended) A method according to claim ~~44~~43, wherein a level comprising a push operation is added to ~~said~~ the compositing table.

49. (Currently Amended) A method according to claim ~~44~~ 43, wherein a corresponding compositing expression of ~~said~~ the further active region is complex.

50. (Currently Amended) A method according to claim ~~49~~ 43, wherein a level comprising a clip operation is added to ~~said~~ the compositing table.

51. (Currently Amended) A method according to claim ~~50~~ 43, wherein a further region is determined on the basis that ~~said~~ the corresponding compositing operation has a complex left operand.

52. (Currently Amended) A method according to claim ~~50~~ 51, wherein a level comprising a pop operation is added to ~~said~~ the compositing table.

53. (Currently Amended) A method according to claim 52, wherein ~~said~~ the pop operation will remove any unused pixel being outside a further active region representing ~~said~~ the complex left operand, during compositing of ~~said~~ the complex left operand.

54. (Currently Amended) A method according to claim 53, wherein ~~said~~ the further active region is the active region of ~~said~~ the complex left operand.

55. (Currently Amended) A method according to claim 53, wherein ~~said~~ the further active region is transformed to a still further region by ~~said~~ the pop operation.

56. (Currently Amended) A method according to claim 55, wherein ~~said~~ still further the effective region is the effective region of ~~said~~ the complex left operand.

57. (Currently Amended) A method according to claim 56, wherein ~~said~~ still further the effective region corresponds to a complex expression.

58. (Currently Amended) A method according to claim 57, wherein a level comprising a clip operation is added to ~~said~~ the compositing table.

59. (Currently Amended) A method according to claim 43, wherein a further active region is determined on the basis that ~~said~~ the corresponding compositing operation has a primitive left operand.

60. (Currently Amended) A method according to claim 43, wherein a level comprising an operation and a data fill value of a particular object constituting ~~said~~ the further active region, is added to ~~said~~ the compositing table.

61. (Currently Amended) A method according to claim 59, wherein ~~said~~ the further region corresponds to a complex expression.

62. (Currently Amended) A method according to claim 61, wherein a level comprising a clip operation is added to ~~said~~ the compositing table.

63. (Currently Amended) A method according to ~~claims~~ claim 59, wherein a level comprising a push operation is added to ~~said~~ the compositing table.

A1  
64. (Currently Amended) A method according to claim 43, wherein ~~said~~ the compositing table is optimised in regard to the number of pixel operations required to render ~~said~~ the image.

65. (Currently Amended) A method according to claim 43, wherein a corresponding compositing expression is a hierarchically structured representation of a particular region represented by ~~said~~ the corresponding compositing expression.

66. (Currently Amended) A method according to claim 65, wherein ~~said~~ the mapping comprises modifying a manner in which ~~said~~ the corresponding compositing expression is evaluated without modifying ~~said~~ the hierarchically structured representation.



67. (Currently Amended) A method according to claim 43, wherein said the image is at least in part a pixel-based image.

68. (Currently Amended) A method according to claim 43, wherein a wholly opaque object in a particular region acts to eliminate one or more operations contributing to at least one other object constituting said the particular region, wherein said the at least one other object is obscured by said the wholly opaque object in a space in which said the outlines are defined.

69. (Removed by Restriction) An apparatus for creating an image, said image to be formed by compositing at least a plurality of graphical objects, each said object having a predetermined outline, said apparatus comprising:

means for determining an expression for each of a plurality of active regions, each said active region being defined by at least one region outline following at least one of said predetermined outlines or parts thereof;

means for determining expressions representing each of a plurality of effective regions depending on at least one characteristic of at least one active region, wherein each said effective region has a corresponding compositing operation; and

means for applying said corresponding compositing operations substantially to said effective regions to create said image.

70. (Removed by Restriction) An apparatus according to claim 69, wherein a further region is determined on the basis that a particular region corresponds to a primitive expression.

71. (Removed by Restriction) An apparatus according to claim 69, wherein an effective region is determined on the basis that a particular active region corresponds to a primitive expression.

72. (Removed by Restriction) An apparatus according to claim 70, wherein said further region is an effective region.

73. (Removed by Restriction) An apparatus according to claim 72, wherein said effective region is equal to the intersection of the clip and active regions of said particular corresponding compositing expression.

74. (Removed by Restriction) An apparatus according to claim 70, wherein a level comprising a push operation is added to said compositing table.

75. (Removed by Restriction) An apparatus according to claim 70, wherein a corresponding compositing expression of said further region is complex.

76. (Removed by Restriction) An apparatus according to claim 75, wherein a level comprising a clip operation is added to said compositing table.

77. (Removed by Restriction) An apparatus according to claim 70, wherein a further region is determined on the basis that said corresponding compositing operation has a complex left operand.

78. (Removed by Restriction) An apparatus according to claim 70, wherein a level comprising a pop operation is added to said compositing table.

A1  
79. (Removed by Restriction) An apparatus according to claim 78, wherein said pop operation will remove any unused pixel being outside a further region representing said complex left operand, during compositing of said complex left operand.

80. (Removed by Restriction) An apparatus according to claim 79, wherein said further region is the active region of said complex left operand.

81. (Removed by Restriction) An apparatus according to claim 79, wherein said further region is transformed to a still further region by said pop operation.

82. (Removed by Restriction) An apparatus according to claim 81, wherein said still further region is the effective region of said complex left operand.

83. (Removed by Restriction) An apparatus according to claim 82, wherein said still further region corresponds to a complex expression.

84. (Removed by Restriction) An apparatus according to claim 82, wherein a level comprising a clip operation is added to said compositing table.

85. (Removed by Restriction) An apparatus according to claim 70, wherein a further region is determined on the basis that said corresponding compositing operation has a primitive left operand.

86. (Removed by Restriction) An apparatus according to claim 70, wherein a level comprising an operation and a data fill value of a particular object constituting said further region, is added to said compositing table.

87. (Removed by Restriction) An apparatus according 85, wherein said further region corresponds to a complex expression.

88. (Removed by Restriction) An apparatus according to claim 87, wherein a level comprising a clip operation is added to said compositing table.

89. (Removed by Restriction) An apparatus according to claims 88, wherein a level comprising a push operation is added to said compositing table.

90. (Removed by Restriction) An apparatus according to claim 70, wherein said compositing table is optimised in regard to the number of pixel operations required to render said image.

91. (Removed by Restriction) An apparatus according to claim 70, wherein a corresponding compositing expression is a hierarchically structured representation of a particular region represented by said corresponding compositing expression.

A1  
92. (Removed by Restriction) An apparatus according to claim 91, wherein said mapping comprises modifying a manner in which said corresponding compositing expression is evaluated without modifying said hierarchically structured representation.

93. (Removed by Restriction) An apparatus according to claim 70, wherein said image is at least in part a pixel based image.

94. (Removed by Restriction) An apparatus according to claim 70, wherein a wholly opaque object in a particular region acts to eliminate one or more operations contributing to at least one other object constituting said particular region, wherein said at least one other object is obscured by said wholly opaque object in a space in which said outlines are defined.

95. (Removed by Restriction) An apparatus for creating an image, said image to be formed by compositing at least a plurality of graphical objects, each said object having a predetermined outline, said apparatus comprising:

division means for dividing a space in which said outlines are defined into a plurality of regions, each said region being defined by at least one region outline following at least one of said predetermined outlines or parts thereof;

processor means for determining a plurality of further regions depending on at least one characteristic of at least one region, wherein each said further region has a corresponding compositing operation;

A/ mapping means for mapping said further regions and corresponding compositing operations into a compositing table, comprising a plurality of levels, wherein each said level of said compositing table represents at least one operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and

compositing means for compositing said image using said compositing table.

96. (Removed by Restriction) An apparatus according to claim 95, wherein a further region is determined on the basis that a particular region corresponds to a primitive expression.

97. (Removed by Restriction) An apparatus according to claim 95, wherein an effective region is determined on the basis that a particular active region corresponds to a primitive expression.

98. (Removed by Restriction) An apparatus according to claim 95, wherein said further region is an effective region.

99. (Removed by Restriction) An apparatus according to claim 98, wherein said effective region is equal to the intersection of the clip and active regions of said particular corresponding compositing expression.

100. (Removed by Restriction) An apparatus according to claim 98, wherein a level comprising a push operation is added to said compositing table.

101. (Removed by Restriction) An apparatus according to claim 95, wherein a corresponding compositing expression of said further region is complex.

102. (Removed by Restriction) An apparatus according to claim 101 wherein a level comprising a clip operation is added to said compositing table.

103. (Removed by Restriction) An apparatus according to claim 95 wherein a further region is determined on the basis that said corresponding compositing operation has a complex left operand.

104. (Removed by Restriction) An apparatus according to claim 103, wherein a level comprising a pop operation is added to said compositing table.

105. (Removed by Restriction) An apparatus according to claim 104, wherein said pop operation will remove any unused pixel being outside a further region representing said complex left operand, during compositing of said complex left operand.

106. (Removed by Restriction) An apparatus according to claim 105, wherein said further region is the active region of said complex left operand.

107. (Removed by Restriction) An apparatus according to claim 105, wherein said further region is transformed to a still further region by said pop operation.

108. (Removed by Restriction) An apparatus according to claim 107, wherein said still further region is the effective region of said complex left operand.

109. (Removed by Restriction) An apparatus according to claim 107, wherein said still further region corresponds to a complex expression.



110. (Removed by Restriction) An apparatus according to claim 109, wherein a level comprising a clip operation is added to said compositing table.

111. (Removed by Restriction) An apparatus according to claim 95, wherein a further region is determined on the basis that said corresponding compositing operation has a primitive left operand.

112. (Removed by Restriction) An apparatus according to claim 96, wherein a level comprising an operation and a data fill value of a particular object constituting said further region, is added to said compositing table.

113. (Removed by Restriction) An apparatus according to claim 111, wherein said further region corresponds to a complex expression.

114. (Removed by Restriction) An apparatus according to claim 113, wherein a level comprising a clip operation is added to said compositing table.

115. (Removed by Restriction) An apparatus according to claim 111, wherein a level comprising a push operation is added to said compositing table.

116. (Removed by Restriction) An apparatus according to claim 95, wherein said compositing table is optimised in regard to the number of pixel operations required to render said image.

117. (Removed by Restriction) An apparatus according to claim 95, wherein a corresponding compositing expression is a hierarchically structured representation of a particular region represented by said corresponding compositing expression.

118. (Removed by Restriction) An apparatus according to claim 117, wherein said mapping comprises modifying a manner in which said corresponding compositing expression is evaluated without modifying said hierarchically structured representation.

119. (Removed by Restriction) An apparatus according to claim 95, wherein said image is at least in part a pixel based image.

120. (Removed by Restriction) An apparatus according to claim 96, wherein a wholly opaque object in a particular region acts to eliminate one or more operations contributing to at least one other object constituting said particular region, wherein said at least one other object is obscured by said wholly opaque object in a space in which said outlines are defined.

121. (Removed by Restriction) A computer readable medium for storing a program for apparatus which processes graphical objects intended to form a raster pixel image, said processing comprising a method of creating an image, said image to be formed by compositing at least a plurality of graphical objects, each said object having a predetermined outline, said method program comprising:

code for determining an expression for each of a plurality of active regions, each said active region being defined by at least one region outline following at least one of said predetermined outlines or parts thereof;

A1 code for determining expressions representing each of a plurality of effective regions depending on at least one characteristic of at least one active region, wherein each said effective region has a corresponding compositing operation; and

code for applying said corresponding compositing operations substantially to said effective regions to create said image.

122. (Removed by Restriction) A computer readable medium for storing a program for apparatus which processes graphical objects intended to form a raster pixel image, said processing comprising a method of creating an image, said image to be formed by compositing at least a plurality of graphical objects, each said object having a predetermined outline, said program comprising:

code for dividing a space in which said outlines are defined into a plurality of regions, each said region being defined by at least one region outline following at least one of said predetermined outlines or parts thereof;

code for determining a plurality of further regions depending on at least one characteristic of at least one region, wherein each said further region has a corresponding compositing operation;

code for mapping said further regions and corresponding compositing operations into a compositing table, comprising a plurality of levels, wherein each said level of said compositing table represents at least one operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and

code for compositing said image using said compositing table.

123. (Currently Amended) A method of creating an image, ~~said~~ the image to be formed by ~~compositing at least~~ rendering a plurality of graphical objects to be composited according to a hierarchical structure representing a compositing expression for ~~said the image, said the~~ hierarchical structure including a plurality of nodes each node being associated with either a compositing operator or an operand of the compositing expression, each operand representing one of the graphical objects or a result of a sub-expression of the compositing expression, said method comprising the steps of:

determining an active region for at least each sub-expression of ~~said the~~ compositing expression, ~~said the~~ active region representing a smallest region in which a result of ~~said the~~ sub-expression is classified as non-transparent;

determining a further active region for at least each sub-expression of ~~said the~~ compositing expression, ~~said the~~ further active region representing an

intersection of all active regions associated with further sub-expressions containing said the sub-expression;

determining a clip region at least for each operand of each of the sub-expressions, each clip region representing a minimum region in which a corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing operation;

A-  
determining an effective region for each of said the nodes, said effective region being dependent on at least one characteristic of an active region associated with an operand of said node and a further region associated with said node, wherein each said effective region has a corresponding rendering operation wherein the effective region for a particular node is equal to the intersection of the further clip regions and the active regions associated with the particular node; and

applying said the corresponding rendering operations substantially to said the effective regions to create said the image.

124. (Currently Amended) The method according to claim 123, said method further including the steps of:

mapping said the effective regions and said the rendering operations into a compositing table comprising a plurality of levels, wherein each said level represents at least one rendering operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and

compositing said the image using said the compositing table.

125. (Currently Amended) The method according to claim 123, wherein ~~said~~ the rendering operations include compositing and stack operations.

126. (Currently Amended) A computer readable medium ~~for~~ storing a program for apparatus which processes graphical objects intended to form a raster pixel image, ~~said~~ the processing comprising a method of creating an image, ~~said~~ the image to be formed by compositing rendering at least a plurality of graphical objects to be composited according to a hierarchical structure representing a compositing expression for ~~said~~ the image, ~~said~~ the hierarchical structure including a plurality of nodes, each node being associated with either a compositing operator or an operand of the compositing expression, each operand representing one of the graphical objects or a result of a sub-expression of the compositing expression, said program comprising:

code for determining an active region for at least each sub-expression of ~~said~~ the compositing expression, ~~said~~ the active region representing a smallest region in which a result of ~~said~~ the sub-expression is classified as non-transparent;

code for determining a further active region for each sub-expression of ~~said~~ the compositing expression, ~~said~~ the further active region representing an intersection of all active regions associated with further sub-expressions containing ~~said~~ the sub-expression;

code for determining a clip region at least for each operand of at least each of the sub-expressions, each clip region representing a minimum region in which a

corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing operation:

code for determining an effective region for each of ~~said~~ the nodes, ~~said effective region being dependent on at least one characteristic of an active region associated with an operand of said node and a further region associated with said node,~~ wherein each of ~~said~~ the effective regions ~~has~~ having a corresponding rendering operation wherein the effective region for a particular node is equal to the intersection of the further clip regions and the active regions associated with the particular node; and

A1  
code for applying ~~said~~ the corresponding rendering operations substantially to ~~said~~ the effective regions to create ~~said~~ the image.

127. (Currently Amended) The computer readable medium according to claim 126, said medium further including storing:

code for mapping ~~said~~ the effective regions and ~~said~~ the rendering operations into a compositing table comprising a plurality of levels, wherein each ~~said~~ level represents at least one rendering operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and

code for compositing ~~said~~ the image using ~~said~~ the compositing table.

128. (Currently Amended) The computer readable medium according to claim 126, wherein ~~said~~ the rendering operations include compositing and stack operations.